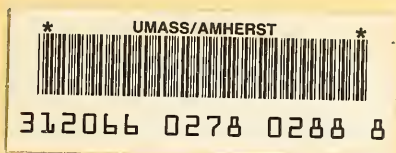
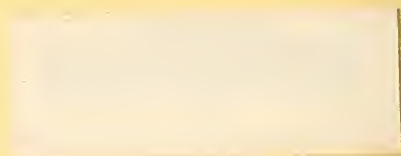


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The Commonwealth of Massachusetts

DEPARTMENT OF LABOR AND INDUSTRIES

# REPORT

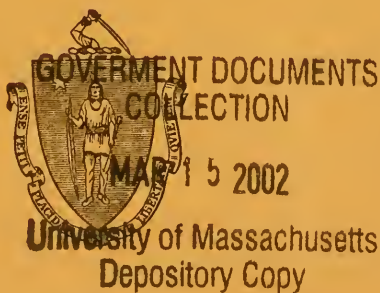
OF THE

## DIRECTOR OF STANDARDS

REPRINT FROM THE ANNUAL REPORT OF THE  
DEPARTMENT OF LABOR AND INDUSTRIES

FOR THE

YEAR ENDING NOVEMBER 30, 1920



BOSTON

WRIGHT & POTTER PRINTING COMPANY, STATE PRINTERS  
32 DERNE STREET

1921

## DEPARTMENT OF LABOR AND INDUSTRIES.

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### PUBLICATIONS OF THE DIVISION OF STANDARDS.

Annual reports, First to thirteenth, 1907-1919.

#### Bulletins:

- |                                      |                                  |
|--------------------------------------|----------------------------------|
| No. 1. July, 1914. <sup>1</sup>      | No. 10. September, 1917.         |
| No. 2. September, 1914. <sup>1</sup> | No. 11. January, 1918.           |
| No. 3. December, 1914. <sup>1</sup>  | Bulletin Supplement, May, 1918.  |
| No. 4. March, 1915.                  | No. 12. June, 1918. <sup>1</sup> |
| No. 5. June, 1915. <sup>1</sup>      | No. 13. September, 1918.         |
| No. 6. October, 1915. <sup>1</sup>   | No. 14. April, 1919.             |
| No. 7. February, 1916.               | No. 15. May, 1919.               |
| No. 8. July, 1916.                   | No. 16. October, 1919.           |
| No. 9. December, 1916.               | No. 17. November, 1920.          |

#### Thrift Series:

- No. 1. How Peggy learned Weights and Measures.
- No. 2. Refrigeration.
- No. 3. Household Economies.

#### Miscellaneous:

- Measurements for the Household, July, 1916. Second edition January, 1917.
- Weights of Bread.
- Clinical Thermometers.
- Sealers' Manual. (Instructions to Weights and Measures Officials.)
- General Laws relating to Weights and Measures and the Licensing, Inspection and Sale of Various Articles.

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<sup>1</sup> Publications out of print.

The Commonwealth of Massachusetts

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DEPARTMENT OF LABOR AND INDUSTRIES

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REPORT

OF THE

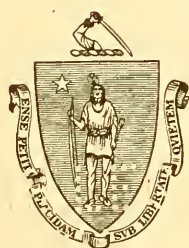
DIRECTOR OF STANDARDS

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PUBLICATION OF THIS DOCUMENT  
APPROVED BY THE  
SUPERVISOR OF ADMINISTRATION.

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OFFICIALS OF THE DEPARTMENT OF  
LABOR AND INDUSTRIES.

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**Commissioner.**

E. LEROY SWEETSER.

**Assistant Commissioner.**

ETHEL M. JOHNSON.

**Associate Commissioners.**

EDWARD FISHER.

SAMUEL ROSS.

HERBERT P. WASGATT.

**Director of Standards.**

FRANCIS MEREDITH.

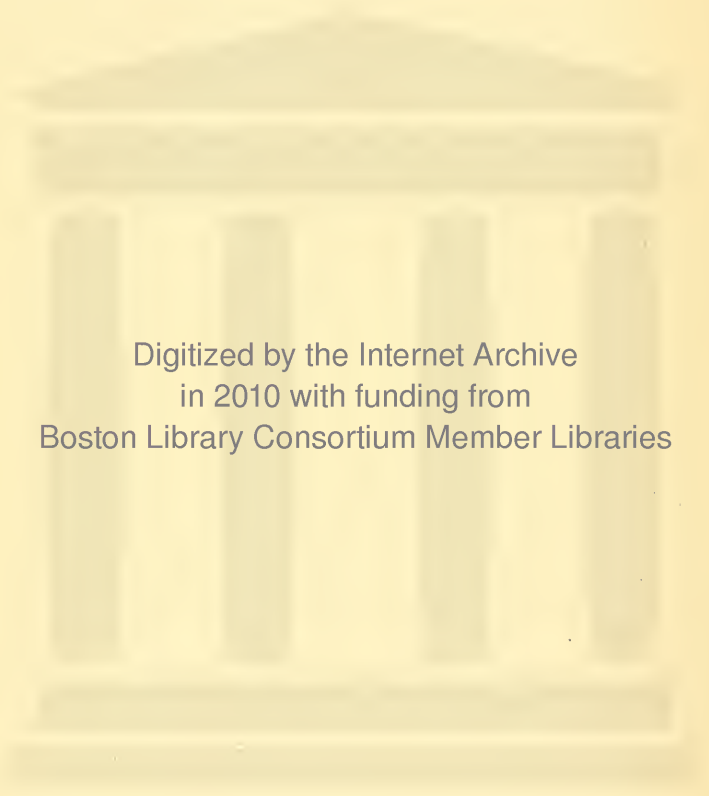




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# REPORT OF THE DIRECTOR OF STANDARDS.

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*To the Commissioner of Labor and Industries.*

I am submitting herewith my first annual report as Director of Standards for the fiscal year ending November 30, 1920. Although this office was not assumed by me until January 29, the report includes such activities of the Division of Standards as were recorded between December 1, 1919, when the Division was established under statutory provision, and the time of my assumption of the duties of Director of Standards.

## ORGANIZATION AND FUNCTIONS.

In the consolidation of departments required by chapter 350, General Acts of 1919, the positions of Commissioner of Standards and Surveyor-General of Lumber were abolished, and all of the rights, powers, duties and obligations of these officials were assigned to the Director of Standards of the newly created Division of Standards. Although the duties and responsibilities thus imposed upon the Director of Standards cover a considerable range, he was fortunate in finding himself associated with an inspection and clerical force thoroughly imbued with the spirit of service and fully capable of performing any duty which might be assigned to them. Through their earnest co-operation, with that of local sealers of weights and measures throughout the Commonwealth, material progress has been made by the Division of Standards during the past year.

## NEW LEGISLATION.

Following is a summary of legislation affecting this Division enacted at the regular session of the General Court for 1920:—

Chapter 45 authorizes the sealing as measures of milk bottles or jars having a capacity of one gill, and permitting the

marking of a definite filling point other than the level of the bottom of the cap or stopple on all milk or cream jars. The latter provision is designed to facilitate the delivery of full measure when milk or cream is pasteurized in the bottle.

Chapter 259 regulates the use of cans, molds and paper or fiber containers used in the sale of ice cream.

Chapter 325 provides for the approval of types of slot-weighing machines and automatic vending devices by the Director of Standards.

Chapter 369 authorizes the Director of Standards to assist manufacturers in standardizing their products, and to test weights, measures, instruments or mechanical devices used in determining wages or compensation for labor performed.

Chapter 418 regulates bakeries and bakery products. While this act relates principally to the sanitary conditions of bakeries, and of containers and vehicles used in the distribution of bakery products, it also establishes standard weights of loaves of bread in units of 1 pound,  $1\frac{1}{2}$  pounds or multiples of 1 pound, and requires that all loaves of other than these standard weights must be marked with the weight of the loaf and the name of the manufacturer thereof. The Director of Standards is required to prescribe such rules and regulations as may be necessary for the enforcement of these provisions.

Chapter 551 empowers the Director of Standards, with the approval of the Commissioner of Labor and Industries, to establish and define grades and kinds of lumber, and to establish fees for the survey and measurement thereof. It also repeals the former statute relative to the sale of shingles, and requires the Director, with the approval of the Commissioner, to establish from time to time standard units of measurement to be observed in the sale of wooden shingles in this Commonwealth.

Chapter 591 makes certain additions and substantive changes in the laws relating to towns. Sections 20 and 21 of this act are in the nature of amendments to the hawkers' and peddlers' license laws. No material change is made excepting the use of a different phraseology in an effort to make the meaning of the statute more clearly apparent.

## RULES AND REGULATIONS.

Under authority or direction of various statutes, rules and regulations have been prepared and promulgated as follows:—

1. Amended specifications and tolerances to be observed in the manufacture of clinical thermometers.

2. Rules and regulations to be observed in the manufacture and sale of bread.

3. Amended regulation for marking food in package form, requiring a statement of quantity of contents upon packages containing more than one-half avoirdupois ounce, or more than one-half fluid ounce, of any article used for food, drink, confectionery or condiment.

4. Units of measurement to be observed in the sale of wooden shingles.

5. Rules for grading lumber now being prepared.

## PROPOSED ADDITIONAL LEGISLATION.

In view of the recent enactment of the General Laws, comprising the Revised Laws of 1902 and all subsequent changes therein and additions thereto, only a general public demand or urgent necessity would justify recommendations for additional new legislation at this time. During the last regular session of the General Court the President of the Massachusetts Ice Dealers' Association and all members of the ice committee, which functioned with the Public Safety Committee during the late war, joined with the Director of Standards in petitioning for legislation requiring ice to be weighed upon delivery, unless such weighing was expressly waived by the purchaser. Chiefly on account of the scarcity and consequent high cost of labor prevailing at that time this bill failed of enactment. As these abnormal conditions no longer prevail, the proposed legislation may be worthy of serious consideration by the incoming Legislature, should the matter be brought to its attention.

## DIVISION PUBLICATIONS.

During the year a bulletin of twenty-six pages was published for the information of local sealers of weights and measures and others interested. This bulletin contained the

weights and measures legislation enacted by the General Court of 1920, with a brief synopsis of the salient features of these enactments and their effect upon existing statutes. It also included specifications and tolerances adopted for the guidance of sealers in their tests of gasoline-measuring devices, and much other information of particular interest to local sealers.

Two pamphlets of four pages each were also published. One of these contained the amended specifications governing the manufacture of clinical thermometers; the other included the new law relative to weights of bread, with the rules and regulations adopted under authority of that statute. Copies of the latter were mailed to each bakery in the Commonwealth and to each local sealer of weights and measures, an edition of 2,000 copies being necessary for this purpose.

#### MEASURING LEATHER.

The accurate measurement of upper leather, used in the manufacture of boots and shoes, presents a problem which can only be solved by the production of measuring devices of greater precision and constancy than any of those now in use. The statute empowers the Director of Standards to make such rules and regulations as he may deem necessary to insure the greatest possible accuracy in the use of these devices, and, under this authority, the speed of operation has been prescribed and other regulations have been adopted in an effort to minimize or eliminate mechanical errors. Operators of leather-measuring devices must secure a certificate of fitness from the Director of Standards as a prerequisite for their appointment and employment as measurers. Of 79 applicants examined during the past year only 35 received certificates of fitness, the other 44 being rejected as not possessing the necessary qualifications. Four disputes between buyers and sellers of leather were referred to this office for adjustment during the year, and  $4,350\frac{3}{4}$  square feet of leather was officially remeasured in connection with these disputes, which involved some thousands of dollars. In three of these cases the leather was manufactured in other States and shipped to shoe manufac-



turers in Massachusetts, and in these cases it is understood that satisfactory settlements have been made upon the basis of percentage of shortage as found upon the official measurement. In the other case referred to, a slight shortage was found, but this was evidently the result of natural shrinkage caused by the length of time and the conditions under which this leather was stored. Massachusetts appears to be the only State having any statutory regulation of leather measurers and leather-measuring devices. In the absence of similar legislation in other States the shoe and leather industries of the entire country are confronted with conditions which may be worthy of the attention of Congress. Manufacturers of shoes and of leather, as well as the cutters in all shoe factories, are interested, the latter perhaps more vitally because of the fact that their tenure of service in any factory is dependent upon their ability to cut a certain number of pairs of shoes from a given quantity of upper leather. Hence, if the measurer's marks upon the various skins or sides of leather are erroneous, the results of such errors are more far-reaching than appears upon the surface.

#### CLINICAL THERMOMETERS.

Under the provisions of chapter 152, General Acts of 1917, four additional manufacturers of clinical thermometers have been authorized to seal as correct clinical thermometers manufactured by them and conforming to samples which have been approved by the Director of Standards. Inspections and tests have been made of clinical thermometers bearing manufacturer's seals, and as a result, in the case of two manufacturers the authority to seal their products was suspended. In each case the necessary authority was restored after a series of tests designed to demonstrate their ability to secure and maintain a sufficient degree of accuracy to warrant such action. Of 6,878 clinical thermometers tested in the Division laboratory during the year, 1,666, or 24.22 per cent, were condemned as inaccurate. The conditions revealed in the testing of clinical thermometers in this State have attracted the attention of physicians and health officials in various sections of the coun-

try. New York City has already made provisions for similar tests by the Health Department, and other States and municipalities are contemplating similar action.

### LABORATORY WORK.

Following is the record of work performed in the laboratory during the year:—

#### *Standards.*

ARTICLE.	Adjusted.	Sealed.	Condemned.
Weights, . . . . .	67	206	10
Measures, . . . . .	—	29	—
Graduates, . . . . .	—	32	—
Totals, . . . . .	67	267	10

#### *Clinical Thermometers.*

Accurate, . . . . .	5,142
Inaccurate, . . . . .	1,666
Broken, . . . . .	70
Total submitted, . . . . .	6,878

#### *Miscellaneous.*

ARTICLE.	Tested.	Accurate.	Inaccurate.
Scales, . . . . .	5	3	2
Weights, . . . . .	27	21	6
Measures (liquid), . . . . .	154	124	30
Measures (dry), . . . . .	2	—	2
Cartons, . . . . .	95	80	15
Milk jars, . . . . .	2	2	—
Incubator thermometers, . . . . .	6	6	—
Steel tapes, . . . . .	3	3	—
Berry baskets, . . . . .	3	3	—
Apple rings, . . . . .	3	3	—
Keg (10 gallons), . . . . .	1	—	1
Sphygmomanometers, . . . . .	4	—	4
Miscellaneous, . . . . .	6	2	4
Commodities, . . . . .	7	5	2
Totals, . . . . .	318	252	66



In addition to the above, 35 miscellaneous articles have been tested to determine their weight, volume or capacity. In connection with investigation of complaints, 91,501 yards of sewing thread and 419 $\frac{2}{3}$  yards of elastic fabric were measured.

FIELD WORK OF INSPECTORS.

Upon assuming office the Director of Standards found that the prevailing system of inspection required the making of numerous records, many of which were of no value and occupied time which the inspectors might use to better advantage. The inspectors were therefore instructed that an individual report of each inspection was unnecessary, except in cases where conditions found would warrant present criticism or future investigation. The following is a summary of these records, the majority of which involved calling the attention of the local sealer to conditions requiring correction. In a comparatively few cases it was deemed necessary for the inspector to prosecute.

<i>Number of Inspections.<sup>1</sup></i>	
Stores, . . . . .	3,547
Hawkers and peddlers, . . . . .	252
Factories, . . . . .	70
Garages, . . . . .	747
Packages, . . . . .	78
Itinerant venders, . . . . .	41
Coal wagons, . . . . .	76
Miscellaneous, . . . . .	3
Total, . . . . .	4,814

<i>Weighing and Measuring Devices.</i>	
Sealed, . . . . .	28,323
Unsealed, . . . . .	3,344
Total, . . . . .	31,667
Accurate, . . . . .	7,518
Inaccurate, . . . . .	772
Total, . . . . .	8,290

<sup>1</sup> In addition to the inspections of commercial weighing and measuring devices, inspections of the standard weights, measures and balances furnished by the Commonwealth to the several cities and towns, and now in the custody of the city and town treasurers, were also made.

*Reweighings.*

ARTICLE.	Correct.	Under.	Over.
Packages, . . . . .	4,928	1,127	578
Coal wagons (loads), . . . . .	22	24	50
Coal in bags, . . . . .	188	90	239
Ice, . . . . .	1	7	1
Totals, . . . . .	5,139	1,248	868

*State Institutions.*

ARTICLE.	Adjusted.	Sealed.	Condemned.
Scales, . . . . .	25	620	80
Weights, . . . . .	16	1,852	64
Measures, . . . . .	—	10	1
Pumps, . . . . .	—	3	2
Totals, . . . . .	41	2,485	147

*Miscellaneous.*

Prosecutions, . . . . .	48
Complaints investigated, . . . . .	41
Leather measurers examined, . . . . .	79
Leather remeasured (square feet), . . . . .	4,350 $\frac{3}{4}$

## OFFICE WORK.

Aside from the routine work incident to the proper handling of official records and correspondence, the activities of the office have been many and varied. Cash to the amount of more than \$60,000 was received in fees for various forms of licenses and for the survey of lumber; and cash to the amount of \$500, or a surety bond for a like amount, was deposited by each of 79 holders of itinerant venders' licenses, to be subject to legal proceedings in behalf of creditors whose claims arise in connection with the business done under these licenses. A complete statement of these financial transactions is included in this report.

In addition to the enforcement of the statutes relating to weights and measures, the following duties and responsibilities are expressly imposed by statute upon the Director of Stand-

ards, and, in consequence, interviews, conferences and hearings upon these subjects were of frequent occurrence:—

1. To authorize manufacturers of milk jars, graduated glass measures, ice-cream measures or clinical thermometers to seal the same as correct under certain conditions, and to revoke such authorization for cause.

2. To issue certificates of fitness to applicants for appointment as leather measurers, and to revoke such certificates for cause.

3. To make rules and regulations necessary to secure the greatest possible accuracy in the use of taximeters and leather-measuring devices.

4. To establish such reasonable variations, tolerances and exemptions as he may deem expedient in the administration of the statute requiring statement of quantity of contents on packages of food.

5. To prescribe rules and regulations necessary for the enforcement of the statute governing the weights of bread.

6. To give hearings to parties concerned before prosecution is begun for violation of the law relative to marking of food packages, or of the law or regulations relative to the marking of loaves of bread of other than standard weights.

7. To appoint employees of State institutions or departments as special deputies for the purpose of checking the receipt and disbursement of supplies.

8. To issue hawkers' and peddlers' and transient venders' licenses, and to revoke the same upon conviction of the licensee of any crime which in his judgment warrants such revocation.

9. To establish the shape and dimensions of paper or fiber containers used in the sale of ice cream.

10. To approve certain types of automatic vending devices.

11. To assist manufacturers in standardizing their products.

12. To determine the accuracy of any weights, measures or other instruments or mechanical devices used for determining wages or compensation for labor performed.

13. To establish and define, with the approval of the Commissioner of Labor and Industries, grades and kinds of lumber and fees for the survey and measurement thereof, and also in like manner to establish units of measurement to be observed in the sale of wooden shingles.

## HAWKERS, PEDDLERS AND ITINERANT VENDERS.

The prevailing industrial depression and consequent increase in unemployment is reflected in the number of hawkers' and peddlers' licenses issued during the year, many of the applicants for these licenses having been heretofore engaged in productive industries. Cancellation of contracts for boots, shoes, clothing, etc., has forced some manufacturers to liquidate their stocks through temporary retail sales. These sales, together with the many transient sales of surplus army supplies, coming within the scope of the itinerant vendors' license law; caused a considerable increase in the number of these licenses issued.

During the year ending November 30, 1920, 1,986 licenses were issued to hawkers and peddlers, an increase of 342 over the preceding year. Of this number, 675 were for the State, 413 for counties, 227 for cities, and 408 for towns. In addition, 79 free licenses issued to disabled veterans of the late war are included in the total reported, and 164 licenses were transferred, no fees being chargeable for such transfers. One State license was revoked upon conviction of the licensee of defrauding purchasers by misrepresenting the quality of merchandise offered for sale.

The total number of itinerant vendors' licenses issued was 79, as against 31 issued during the preceding year.

## FOOD IN PACKAGE FORM.

The regulation for marking food in package form originally adopted under authority of section 2, chapter 653, Acts of 1914, provided that packages containing 2 avoirdupois ounces or less, and those containing 1 fluid ounce or less, should be considered as "small" packages, and therefore exempted from marking of quantity of contents.

Some packers of spices and similar commodities took advantage of this exemption by reducing the quantity contained in their packages nearly one-half while using the same size containers, thus deceiving the purchasers. This abuse assumed such proportions that on April 26, 1919, the Federal regulation was amended so as to require the marking of quantity of contents on all packages containing more than one-half avoirdupois ounce of food.

Recent investigation by inspectors of this Division developed the fact that considerable quantities of flavoring extracts and similar commodities were being offered for sale in this Commonwealth in so-called "paneled" bottles containing only three-fourths liquid ounce, although the apparent size of the bottle would lead the purchaser to believe that he was receiving about 2 fluid ounces.

In order to protect the consumer against this form of fraud, amendments to the regulation have been adopted, and a certified copy having been filed with the Secretary of the Commonwealth, are now in full force and effect. The complete text of these amendments may be found on pages 267 and 268, Bulletin No. 17, published by this Division in November, 1920.

#### LOCAL SEALERS OF WEIGHTS AND MEASURES.

Sealers of weights and measures in the various cities and towns are required by statute to report annually to the Director of Standards. A summary of these reports is presented herewith.

A permanent organization of local sealers has been in existence for some years, and the Director has had several conferences with official representatives of the Sealers' Association, together with individual sealers, with a view to bringing about unity of action in eliminating from use weighing and measuring devices of faulty construction or of questionable accuracy. These conferences have engendered a splendid spirit of co-operation, without which efficient service could not be secured or expected in many towns where the compensation is small and the tenure of office uncertain.

#### *Summary of Work performed by Local Sealers.*

ARTICLE.	Adjusted.	Sealed.	Non-sealed.	Con-demned.
<i>Scales.</i>				
Platform (5,000 pounds and over), . . .	497	3,112	77	224
Platform (100 to 5,000 pounds), . . .	6,038	26,904	1,120	1,287
Counter, . . . . .	2,789	18,446	539	722
Beam, . . . . .	195	2,387	93	138
Spring, . . . . .	2,775	26,509	342	2,922

*Summary of Work performed by Local Sealers — Concluded.*

ARTICLE.	Adjusted.	Sealed.	Non-sealed.	Con-demned.
<i>Scales — Concluded.</i>				
Computing, . . . . .	6,028	15,064	104	1,601
Slot-weighing, . . . . .	49	2,097	21	156
Prescription, . . . . .	104	1,574	39	130
Jewelers, . . . . .	12	151	30	11
Miscellaneous, . . . . .	1	64	1	—
Totals, . . . . .	18,488	96,308	2,366	7,191
<i>Weights.</i>				
Avoirdupois, . . . . .	8,165	185,944	990	1,448
Apothecary, . . . . .	323	19,103	166	1,053
Metric, . . . . .	207	10,789	265	221
Troy, . . . . .	168	2,739	30	95
Totals, . . . . .	8,863	218,575	1,451	2,817
<i>Measures.</i>				
Dry, . . . . .	8	2,763	6	203
Liquid, . . . . .	220	30,978	27	1,399
Linear, . . . . .	113	7,124	5	454
Milk jars, . . . . .	—	544	—	2
Glass graduates, . . . . .	—	232	—	—
Automatic measuring devices, . . . . .	1,580	10,144	528	723
Ice-cream cans, . . . . .	486	38,060	25	675
Measuring machines (leather, etc.), . . . . .	2	461	5	19
Taximeters, . . . . .	2	755	—	33
Miscellaneous, . . . . .	—	2,816	37	19
Total, . . . . .	2,411	93,877	633	3,527
Grand total, . . . . .	29,762	408,760	4,450	13,535

*Reweighing.*

COMMODITY.	Number reweighed.	Correct.	Over-weight.	Under-weight.
Coal (loads), . . . . .	1,291	503	483	305
Miscellaneous, . . . . .	101,985	73,264	15,876	12,845
Total, . . . . .	103,276	73,767	16,359	13,150



*Prosecutions.*

Total number prosecuted,	257
Convicted,	232
Discharged,	11
Continued,	12
Defaulted,	2
Appealed,	14

Fines aggregating \$3,333 and one sentence of thirty days in the house of correction were imposed. In addition to these penalties, restitution in the following amounts was required to be made in several cases: \$800, \$740, \$400, \$90 and \$60. In another case the defendant was required to give \$200 to charity, and in several cases involving short weight in sales of ice the defendants were required to furnish their victims with free ice for a considerable period.

The work, if any, performed in the following towns is not included in this compilation, as the local sealers have not filed their annual reports as required by law: Buckland, Canton, Dighton, Goshen, Heath, Holliston, Hopkinton, Mansfield, Millis, New Ashford, Norfolk, Otis, Peru, Rockland and Williamsburg. The reports from Hubbardston and Oak Bluffs were received too late to be included.

## LUMBER SURVEY.

Under the provisions of chapter 350, General Acts of 1919, the office of Surveyor-General of Lumber was abolished and the duties of that office assigned to the Director of Standards. However, the latter office was not filled until January 29, and the necessary changes in the existing laws relative to such matters as grades and kinds of lumber, appointment of surveyors and fixing of fees were not enacted until May 27. In consequence of these conditions the duties of the Director in connection with the survey of lumber were not fully assumed by him until July 1, and the following synopsis of that work covers only the period commencing on that date and ending on November 30.

A study of the problems involved in the survey of lumber elicited the fact that Massachusetts is the only State providing for an official determination of grades and kinds of lumber

under governmental auspices; that there are a number of associations of lumber manufacturers and wholesalers in various sections of the country which have established grading rules for lumber manufactured in or shipped from their respective sections, and that some of these associations maintain a traveling force of inspectors to resurvey lumber in case of dispute as to grading; that with some kinds of lumber either one of two or more sets of these association grading rules may be applied in accordance with prevailing practice, thus causing a lack of uniformity in similar grades, with consequent confusion in figuring on building material; that much of the lumber coming from territory covered by the grading rules of the various associations is a virgin growth, while most of the pine, spruce and hemlock now obtainable in New England, eastern Canada and the Maritime Provinces is a second growth for grading which there appear to be no definite rules in existence.

In spite of these conditions some progress has been made in systematizing the methods pursued by surveyors of this Division, and rules are now being formulated for the grading of eastern pine, spruce and hemlock mentioned above. While it is planned to make the work of lumber surveying self-supporting, the expenditures for the five months covered by this report exceeded the receipts by \$456.80. This may easily be remedied in the coming year by a revision of the fees now charged for surveying, which are much lower than those charged by the lumber associations for similar service.

#### NEW UNITS OF MEASUREMENT FOR SHINGLES.

On April 1, 1920, the manufacturers of red cedar shingles adopted a new system of packing their product according to the "square" unit, instead of the so-called "thousand" unit which formerly prevailed, and it is stated that at least 85 per cent of these shingles are now packed according to the new unit.

The principal reason for the change was the fact that all other forms of roofing material, with the possible exception of slate, are sold by the "square," and the average person would naturally compare the price of the "square" of other roofing with the price per "thousand" of the wooden shingle, thus



subjecting the latter to an unjust and erroneous price comparison.

Unless the sale of shingles by the square unit were legalized the greater part of the western red cedar shingles would be kept out of the Massachusetts market at a time when sound public policy requires the fullest and freest possible competition in the sale of building materials.

Fortunately, the Legislature of 1920 anticipated this condition, and inserted a provision in chapter 551 (relative to the survey of lumber) which requires the Director of Standards, with the approval of the Commissioner of Labor and Industries, to establish from time to time units of measurement to be observed in the sale of wooden shingles in this Commonwealth. Acting under this authority units of measurement have been established and published in Bulletin No. 17, issued by this Division in November, 1920.

*Lumber Surveyed and Measured from July 1 to November 30, 1920.*

[Unless otherwise specified, figures indicate number of feet, board measure.]

Hardwood,	2,928,800
Hard pine,	4,087,990
White pine,	270,838
Pine boards,	1,789,244
Spruce,	3,395,995
Cypress,	1,212,388
Flooring,	334,139
Fir,	188,278
Cedar,	22,869
Tupelo,	21,738
White wood,	129,217
North Carolina pine,	977,934
Idaho pine,	17,808
Hemlock,	321,757
Sugar pine,	10,477
Yellow pine,	874,383
Spruce sheathing,	20,474
Red wood,	25,603
Total amount surveyed and measured,	16,629,932

In addition to the above,  $1,541\frac{3}{8}$  cubic tons (61,654 cubic feet) of mahogany logs and 340 hackmatack ship knees were surveyed during the period covered by this report.

# DEPARTMENT OF LABOR AND INDUSTRIES.

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## **ADMINISTRATION OFFICES.**

Rooms 469-473, State House, Boston.

Includes offices of commissioners and directors of divisions.

The office of the Director of Standards is Room 194, State House.

## **BRANCH OFFICES.**

### **Division of Industrial Safety.**

Fall River, Globe Building.      North Adams, New Kimbell Building.

Lawrence, Bay State Building.      Springfield, 21 Besse Place.

Worcester, Slater Building.

## **PUBLIC EMPLOYMENT OFFICES.**

Boston, 8 Kneeland Street.

Worcester, 48 Green Street.

Springfield, Water and Worthington streets.

Mass.

Pub. doc.

83

1920



The Commonwealth of Massachusetts

DEPARTMENT OF LABOR AND INDUSTRIES

# REPORT

OF THE

## DIRECTOR OF STANDARDS

REPRINT FROM THE ANNUAL REPORT OF THE  
DEPARTMENT OF LABOR AND INDUSTRIES

FOR THE

YEAR ENDING NOVEMBER 30, 1921



BOSTON

WRIGHT & POTTER PRINTING COMPANY, STATE PRINTERS  
32 DERNE STREET

1922

## DEPARTMENT OF LABOR AND INDUSTRIES.

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### PUBLICATIONS OF THE DIVISION OF STANDARDS.

Annual reports, First to fourteenth, 1907-1920.

#### Bulletins:

- |                                      |                                  |
|--------------------------------------|----------------------------------|
| No. 1. July, 1914. <sup>1</sup>      | No. 11. January, 1918.           |
| No. 2. September, 1914. <sup>1</sup> | Bulletin Supplement, May, 1918.  |
| No. 3. December, 1914. <sup>1</sup>  | No. 12. June, 1918. <sup>1</sup> |
| No. 4. March, 1915.                  | No. 13. September, 1918.         |
| No. 5. June, 1915. <sup>1</sup>      | No. 14. April, 1919.             |
| No. 6. October, 1915. <sup>1</sup>   | No. 15. May, 1919.               |
| No. 7. February, 1916.               | No. 16. October, 1919.           |
| No. 8. July, 1916.                   | No. 17. November, 1920.          |
| No. 9. December, 1916.               | No. 18. November, 1921.          |
| No. 10. September, 1917.             |                                  |

#### Thrift Series:

- No. 1. How Peggy learned Weights and Measures.
- No. 2. Refrigeration.
- No. 3. Household Economics.

#### Miscellaneous:

- Measurements for the Household, July, 1916. Second edition January, 1917.
- Weights of Bread.
- Clinical Thermometers.
- Sealers' Manual. (Instructions to Weights and Measures Officials.)
- General Laws relating to Weights and Measures and the Licensing, Inspection and Sale of Various Articles.

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<sup>1</sup> Publications out of print.

The Commonwealth of Massachusetts

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DEPARTMENT OF LABOR AND INDUSTRIES

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# REPORT

OF THE

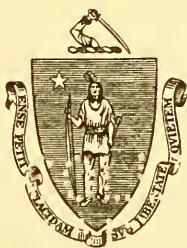
# DIRECTOR OF STANDARDS

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REPRINT FROM THE ANNUAL REPORT OF THE  
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FOR THE

YEAR ENDING NOVEMBER 30, 1921



BOSTON

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1922

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# OFFICIALS OF THE DEPARTMENT OF LABOR AND INDUSTRIES.

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## **Commissioner.**

E. LEROY SWEETSER.

## **Assistant Commissioner.**

ETHEL M. JOHNSON.

## **Associate Commissioners.**

EDWARD FISHER.

SAMUEL ROSS.

HERBERT P. WASGATT.

## **Director of Standards.**

FRANCIS MEREDITH.



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# REPORT OF THE DIRECTOR OF STANDARDS.

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FRANCIS MEREDITH, *Director of Standards.*

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The progress of the work conducted by the Division of Standards during the past year is in a large measure the result of the loyal, intelligent and cheerful labors of the clerical and inspection force, aided by the earnest co-operation of the great majority of local sealers of weights and measures throughout the Commonwealth. Following is an account of the principal activities of the Division, an outline of new legislation enacted during the period covered by the report, together with financial statement and budget for the ensuing year.

## STANDARDIZATION.

The conception of standardization has changed within recent years, and the adoption and application of standards has become the fundamental of efficiency in industry as well as in commerce. Industrial engineers consider standardization necessary for the simplification of the processes of manufacture, thus lowering production costs with corresponding benefit to producer and consumer.

This broadened field for the work has been recognized by the General Court in the past three years, and legislation enacted during that period authorizes the Director of Standards to assist manufacturers in standardizing their products, to define grades and kinds of lumber, and to regulate the shape, dimensions and capacity of containers used in the sale of certain commodities. Much has already been accomplished in this direction.

It is gratifying to note that the leadership of Massachusetts in this work is recognized throughout the country, the heads of similar departments in other States frequently calling upon this Division for consultation and advice; also that at the

national conference held annually at Washington, the Massachusetts delegates, both State and local, are prominent in the deliberations looking toward uniform legislation on this subject throughout the United States, and concerted action in its enforcement.

#### NEW LEGISLATION.

Although, in view of the revision of the statutes and their re-enactment as the General Laws, no recommendations for new legislation were made in the report of the Division for 1920, numerous petitions were received and considered by the General Court at the last session. As a result nine acts and one resolve coming within the scope of this Division were enacted and approved by the Governor. Following is a summary of this legislation:—

*Chapter 45, relative to the Marking and Sealing of Cans and Containers used in the Wholesale Distribution of Milk or Cream.*

— This act requires that all cans or containers sold for use in the purchase or sale of milk or cream at wholesale shall have their capacity plainly indicated, and shall be sealed by the manufacturer or by the sealer of weights and measures. It permits the Director of Standards to authorize sealing by the manufacturer under regulations prescribed by him, and penalizes the sale or use of any such cans or containers which have not been marked and sealed as required by this chapter.

*Chapter 89, relative to the Sale of Paper Bags or Sacks used in the Sale of Coke, Charcoal and Kindling Wood.* — By the provisions of an act passed in 1919, the dimensions, filling point and marking of bags or sacks to be used in the sale of these commodities were prescribed, and penalty imposed upon users of such bags which did not comply with these requirements. This act is now amended by providing a fine of not more than \$100 for any person, either principal or agent, who sells or offers for sale a bag or sack to be used in the sale of coke, charcoal or kindling wood by measure which does not conform in every particular to the legal requirements.

*Chapter 94, relative to the Use of Labels on Loaves of Bread.* — Under the former provisions of section 8, chapter 94, General Laws, not more than one label was permitted upon any loaf or unit. This served to eliminate the use of the “union”

label, although such elimination had not been contemplated, and the existing law was therefore amended so as to correct this condition by striking out this limitation.

*Chapter 95, relative to the Sale of Coal and Coke.* — This amendment legalizes the sale of coal and coke in bags or baskets containing quantities of 100 pounds or less without requiring the delivery of a sworn weigher's certificate. Under the former statute only quantities of less than 100 pounds could be sold in this manner.

*Chapter 106, relative to Transient Vendors.* — The transient vendor's license law, which has been on the statute books for thirty years, has been difficult of enforcement in some cases on account of the absence of a statutory definition of "transient" business. This is now defined as meaning and including any exhibition and sale of goods, wares or merchandise which is carried on in any tent, booth, building or other structure, unless such place is open for business during usual business hours for a period of at least ten months in each year. This amendment has aided in the enforcement of the law against retail dealers from other States who conduct business at Massachusetts summer resorts and contribute nothing towards police or fire protection or other municipal protection which they enjoy while engaging in competition with local traders.

*Chapter 248, establishing a Massachusetts Standard for Boxes and Half Boxes for Farm Produce sold at Wholesale.* — The standards established by this act are the standard box containing 2,150.42 cubic inches and having the following interior dimensions:  $17\frac{1}{2}$  inches in length by  $17\frac{1}{2}$  inches in width and  $7\frac{1}{16}$  inches in depth; and the standard half box containing 1,075.21 cubic inches and having dimensions of  $12\frac{3}{8}$  inches in length by  $12\frac{3}{8}$  inches in width and  $7\frac{1}{16}$  inches in depth. This act becomes effective March 1, 1922.

On account of the disparity in the actual weight of the measured bushel of various fruits, vegetables and other commodities, as compared with the established legal weights per bushel which are required to be observed in retail sales, the following resolve was adopted by the Legislature with a view to correcting this condition: —

*Chapter 8, Resolve providing for an Investigation relative to the*

*Bushel Weight of Fruits, Vegetables and Other Commodities.* — By this resolve the Commissioner of Labor and Industries, the Director of Standards, the Commissioner of Agriculture, and the Director of the Division of Markets, sitting jointly, are directed to investigate the expediency of revising the schedule of bushel weights prescribed for fruits, vegetables and other commodities, and to make such recommendations for legislation as may tend to establish a more satisfactory basis for the retail sale of said commodities.

*Chapter 251, relative to the Measurement and Sale of Cordwood and Firewood.* — This act provides that cordwood shall be 4 feet in length, and that the term "firewood" shall be construed to mean and include wood cut to any lengths of less than 4 feet. It also establishes the standard unit of measure for cordwood and firewood as the "cord" of 128 cubic feet, consisting of or equivalent to a pile, closely stacked, 8 feet in length, 4 feet in width and 4 feet in height. It also requires the delivery to the purchaser of a certificate or memorandum, including the names of the seller and purchaser and a statement of the quantity delivered in terms of cords or of cubic feet. A fine of not more than \$50 is provided for violation of any of these provisions. A strict observance of this statute should tend to eliminate complaints of deficiencies in sales and deliveries of wood sawed to various lengths for domestic use.

*Chapter 263, governing the Manufacture and Sale of Clinical Thermometers.* — Under the provisions of chapter 152, Acts of 1917, several manufacturers of clinical thermometers had submitted samples of their product intended to demonstrate their ability to maintain a high degree of accuracy, and were thereupon authorized to affix the manufacturer's seal instead of submitting thermometers to the Director of Standards for test before offering them for sale in Massachusetts. Later investigation showed that some of these manufacturers were abusing this authority by selling thermometers bearing the manufacturer's seal which would not pass a satisfactory test for accuracy. The existing law did not authorize taking possession for official test of any thermometers which bore the manufacturer's seal. Further legislation appearing necessary, the Director petitioned for and the Legislature enacted chapter 263



as an "emergency" act which became effective when signed by the Governor on April 12. This act provides that the Director of Standards may inspect and test any clinical thermometers in the possession of any manufacturer or dealer in the Commonwealth, and for this purpose may remove them to such place as he may deem most convenient. If any thermometer is found to be incorrect he is empowered to condemn, seize and destroy it. The Director is authorized to prescribe rules and regulations governing the manufacture and sale of clinical thermometers, and may authorize sealing by the manufacturer thereof who agrees to conform to such rules and regulations and files a surety bond in such amount and upon such conditions as the Director may require. The Director is authorized to revoke the authority given by him to any manufacturer who does not conform to the rules and regulations. Any person offering or exposing for sale or selling a clinical thermometer which has not been sealed or certified as correct by the Director or by the manufacturer is liable to a fine not exceeding \$10 for each thermometer so sold, or kept, offered or exposed for sale. Whoever violates any rule or regulation prescribed by the Director is punishable by a fine of not more than \$50.

*Chapter 374, regulating the Sale of Certain Articles and the Containers in which they may be sold.* — Section 22, chapter 98, General Laws, standardized capacities of paper or fiber cartons used in the sale of ice cream by measure, and required that such cartons be of such shape and dimensions as might be approved by the Director of Standards, who was also empowered to authorize the printing of an approval statement upon all cartons conforming to approved samples. Chapter 374, Acts of 1921, now extends the same provisions to similar containers to be used in the sale of viscous or semi-solid commodities, or mixtures of solids and liquids; providing, further, that such approved cartons shall be legal measures only for such commodities as may be designated by the Director.

#### ADDITIONAL LEGISLATION.

In view of the fact that ten measures (nine acts and one resolve) relating to standards were enacted during the annual session of the Legislature in 1921, no further legislation is recommended at this time.

## RULES AND REGULATIONS.

Under statutory authority amended rules and regulations to be observed in the manufacture and sale of bread have been prepared and promulgated. Rules for grading eastern pine, spruce and hemlock lumber, and amended specifications and tolerances to be observed in the manufacture and sale of clinical thermometers, are now being prepared under similar authority.

## DIVISIONAL PUBLICATIONS.

During the year a pamphlet<sup>1</sup> of 132 pages was compiled and published which presents in concise form the General Laws and all amendments with the enforcement of which this Division is charged. Appropriate marginal notes trace each section to its origin and refer also to court decisions and Attorney-General's opinions in relation thereto.

There was also published a bulletin<sup>2</sup> of 29 pages containing a synopsis of amendments to weights and measures laws enacted at the last session of the Legislature, recent opinions of the Attorney-General, specifications and tolerances for gasoline pumps and other liquid-measuring devices, amended bread regulations, and much other information of particular value to sealers of weights and measures.

The specifications and tolerances for gasoline pumps, etc., were also reprinted in a separate pamphlet for the information of pump manufacturers and wholesale and retail dealers in gasoline.

## CLINICAL THERMOMETERS.

As previously noted under "New Legislation," conditions found early in the year resulted in emergency legislation more rigidly regulating the manufacture and sale of clinical thermometers and extending the powers of the Director of Standards in that direction. The wisdom and necessity of this legislation is clearly shown by the fact that inspection and test of 4,564 thermometers bearing the manufacturers' seal-mark resulted in the suspension or revocation of the right to use the seal-mark in the case of five of the manufacturers

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<sup>1</sup> General Laws of Massachusetts relating to Weights and Measures, 1921.

<sup>2</sup> Bulletin No. 18, November, 1921.

involved, they being thereafter required to submit all thermometers to this office for test and certification before selling or offering them for sale in this State. Through such action future purchasers of clinical thermometers in this State may be reasonably certain of procuring a safe and accurate instrument. Following is a record of the tests upon which the suspensions and revocations were based: tested, 4,564; passed, 2,306; rejected, 2,258, or 49.4 per cent.

### LABORATORY WORK.

Following is a synopsis of work performed in the laboratory during the past year:—

#### *Standards.*

ARTICLE.	Adjusted.	Sealed.	Condemned.
Weights . . . . .	41	113	-
Measures, liquid and dry . . . . .	12	31	1
Measures, linear . . . . .	-	1	-
Graduates . . . . .	-	11	9
Totals . . . . .	53	156	10

#### *Clinical Thermometers.*

Accurate . . . . .	7,428
Inaccurate . . . . .	4,301
Broken when received or during test . . . . .	157
Total submitted . . . . .	11,886

#### *Cans and Containers.*

In connection with applications of manufacturers for authority to use the manufacturer's seal upon milk and ice-cream cans, or for approval of shape and dimensions of paper or fiber cartons intended for use in the sale of ice cream or other viscous or semi-solid commodities, the following laboratory tests were made:—

ARTICLE.	Tested.	Accurate.	Inaccurate.
Ice-cream cans . . . . .	57	50	7
Milk cans . . . . .	36	30	6
Cartons, ice cream . . . . .	632	411	221
Cartons, viscous, etc., commodities . .	123	96	27
Totals . . . . .	848	587	261

*Miscellaneous.*

ARTICLE.	Tested.	Accurate.	Inaccurate.
Apple rings . . . . .	5	5	-
Berry baskets . . . . .	14	3	11
Cartons . . . . .	18	17	1
Graduates . . . . .	2	2	-
Incubator thermometers . . . . .	11	6	5
Measures, dry . . . . .	5	5	-
Measures, linear . . . . .	2	2	-
Measures, liquid . . . . .	183	175	8
Milk jars . . . . .	306	225	81
Paper bags, coke and kindling wood . .	3	2	1
Scales . . . . .	2	1	1
Sphygmomanometers . . . . .	1	-	1
Surveyors' steel tapes . . . . .	6	6	-
Weights . . . . .	23	21	2
Wood baskets . . . . .	2	1	1
Miscellaneous . . . . .	8	5	3
Totals . . . . .	591	476	115

In addition to the above, 23 miscellaneous articles have been tested to determine their weight, measure or volume. Sixteen articles of food were weighed for the Commission on the Necessaries of Life in connection with their investigation of restaurant charges, and six bullets were weighed for the Department of Public Safety in preparation of cases for prosecutions.

## FIELD WORK OF INSPECTORS.

In their field work during the year the inspectors followed their instructions to make detailed records only in cases where

conditions warranted present criticism or future investigation. Following is a summary of these records, only 36 of which showed conditions which necessitated prosecution:—

*Number of Inspections.<sup>1</sup>*

Coal wagons (weigher's certificates, etc.) . . . . .	50
Dairies . . . . .	11
Drug stores (clinical thermometers, etc.) . . . . .	8
Factories (leather measuring machines, etc.) . . . . .	62
Garages . . . . .	679
Hawkers and peddlers . . . . .	453
Ice wagons . . . . .	6
Net weight markings . . . . .	30
Packages . . . . .	75
Stores (miscellaneous) . . . . .	1,779
Transient vendors . . . . .	92
<hr/>	
Total . . . . .	3,245

*Ice-cream Containers.*

Inspections were made in 53 stores of paper and fiber cartons used in the sale of ice cream by measure. Of 94,608 of these cartons which were found, 29,791 bore the printed statement prescribed by section 22, chapter 98, General Laws, as amended, showing that their shape and dimensions had been approved by the Director of Standards, while 64,817 were of unapproved types.

*Weighing and Measuring Devices.*

Sealed . . . . .	13,678
Unsealed . . . . .	1,911
<hr/>	
Total . . . . .	15,589
Accurate . . . . .	3,323
Inaccurate . . . . .	427
<hr/>	
Total . . . . .	3,750

<sup>1</sup> In addition to the inspection of commercial weighing and measuring devices, inspections were made of the standard weights, measures and balances furnished by the Commonwealth to each city and town and now in the custody of the several city and town treasurers.

*Reweighings and Remeasurements.*

ARTICLE.	Correct.	Under.	Over.
Coal (in bags) . . . . .	26	24	37
Coal (loads) . . . . .	15	24	26
Crushed stone . . . . .	2	8	1
Ice . . . . .	-	7	3
Milk (in jars) . . . . .	60	68	-
Packages . . . . .	3,424	829	534
Totals . . . . .	3,527	960	601

In addition to the above a considerable number of experimental weighings were made by the inspectors to determine the actual weight of the measured bushel of various commodities as compared with the legal weight per bushel of the same commodities in connection with the investigations of the Commission designated by chapter 8, Resolves of 1921, to recommend such legislation as will tend to establish a more satisfactory basis for retail sales.

*State Institutions.*

ARTICLE.	Adjusted.	Sealed.	Condemned.
Scales . . . . .	63	672	75
Weights . . . . .	73	2,686	29
Measures . . . . .	-	17	-
Pumps . . . . .	2	5	1
Totals . . . . .	138	3,380	105

*Miscellaneous.*

Prosecutions . . . . .	36
Complaints investigated . . . . .	75
Leather measurers examined . . . . .	62

## OFFICE WORK.

There has been a tremendous and unexpected increase in the routine work as well as in the various other office duties and activities. The successful handling of this increased volume



of business was rendered possible only through the loyalty and self-sacrifice of the limited office force, each member of which put in many hours of overtime work without any additional compensation, there being but \$200 available for additional assistance, and much of this being necessarily expended for laboratory work.

Cash amounting to \$89,088.97 was received in fees for various kinds of licenses, for testing clinical thermometers, and for surveys of lumber. The sum of \$500 in cash, or a surety bond for a similar amount, was deposited by each of 162 holders of transient vendors' licenses to be subject to legal proceedings in behalf of creditors having claims arising in connection with the business conducted under these licenses. A complete statement of these financial transactions is included in this report.

As noted elsewhere, 11,886 clinical thermometers were received for test, this work requiring a complete record of each individual thermometer tested, and the issuance of a certificate to accompany each one passing a satisfactory test which had not been previously sealed by the manufacturer under authority of the Director.

Statutory duties and responsibilities of the Director necessitated almost daily interviews, conferences and hearings, the subjects involved including the following: standardization of shapes, dimensions and capacities of containers used in the sale of milk, ice cream and various other commodities; violations of the statute requiring a plain and conspicuous statement of quantity of contents on packages of food; violations of regulations relative to weights of bread; approval of types of automatic vending devices; the grading of various kinds of lumber; assisting manufacturers of various weighing and measuring devices by suggesting or requiring changes in construction or operation necessary for improved accuracy and efficiency in the use of such devices; and various other miscellaneous subjects.

#### HAWKERS, PEDLERS AND TRANSIENT VENDORS.

During the year ending November 30, 1921, 2,694 licenses were issued to hawkers and pedlers, an increase of 708 over the preceding year. Of this number, 1,115 were for the State,

634 for counties, 275 for cities and 670 for towns. In addition 248 free licenses were issued to disabled veterans of the World War, and 276 licenses were transferred, no fees being chargeable for their transfers. Two State licenses issued to hawkers and peddlers were revoked, following conviction of one licensee in court and the discovery that the other had obtained his license by false representation as to citizenship.

The total number of transient vendors' licenses issued was 162, as against 79 issued during the previous year.

#### LOCAL SEALERS OF WEIGHTS AND MEASURES.

Section 37, chapter 98, General Laws, requires that "each sealer shall annually, between the first and tenth days of December, report to the director the weighing and measuring devices tested, sealed or condemned by him, with an inventory of standards and working apparatus in possession of his town or district, and other information required by the director."

This requirement applies to the local sealer in each of the 355 cities and towns of the Commonwealth. The work, if any, performed in the following towns is not included in the attached compilation, as the local sealers have not filed their annual reports: Belchertown, Canton, Dighton, Eastham, Hopkinton, Millis, Mount Washington, New Braintree, Otis and Pelham. The reports from Hubbardston, Oak Bluffs and Newburyport were received too late to be included. In the latter case no blame is attached to the local sealer, as delay was caused by non-delivery of the necessary blank forms to be used for the report. Upon the whole, the work performed is worthy of commendation in view of the fact that the compensation allowed in many towns is utterly inadequate and the service performed depends largely upon the willingness of the sealer to make a personal sacrifice for the benefit of the community.

The co-operation between the local sealers and the Division of Standards has continued during the past year, harmonizing differences of opinion and bringing about unity of action. The result of this unity is shown by the gradual extension of the use of improved and more accurate weighing and measuring devices throughout the Commonwealth.



*Summary of Work performed by Local Sealers.*

ARTICLE.	Adjusted.	Sealed.	Non-sealed.	Con-demned.
<i>Scales.</i>				
Platform (5,000 pounds and over) . . .	485	3,014	47	196
Platform (100 to 5,000 pounds) . . .	5,728	25,926	1,070	1,111
Counter . . . . .	2,909	18,969	475	1,043
Beam . . . . .	200	2,421	58	152
Spring . . . . .	3,450	26,712	323	2,662
Computing . . . . .	2,837	15,869	117	1,182
Slot weighing . . . . .	73	2,638	27	239
Prescription . . . . .	149	1,640	26	85
Jewelers . . . . .	11	140	4	7
Miscellaneous . . . . .	66	219	1	18
Totals . . . . .	15,908	97,548	2,148	6,695
<i>Weights.</i>				
Avoirdupois . . . . .	12,928	182,369	1,257	679
Apothecary . . . . .	589	19,050	106	730
Metric . . . . .	234	9,756	435	171
Troy . . . . .	123	2,317	214	41
Totals . . . . .	13,874	213,492	2,012	1,621
<i>Measures.</i>				
Dry . . . . .	19	3,124	2	126
Liquid . . . . .	187	34,829	44	1,155
Linear . . . . .	207	8,756	3	382
Computing measuring devices . . .	2	411	-	73
Tapes . . . . .	1	153	1	6
Milk jars . . . . .	-	3,845	-	17
Glass graduates . . . . .	-	567	-	74
Automatic measuring devices . . .	2,511	12,590	394	799
Ice-cream cans . . . . .	694	18,605	-	393
Measuring machines (leather, etc.) . .	-	433	23	7
Taximeters . . . . .	1,155	984	-	49
Miscellaneous . . . . .	1,431	4,917	1	115
Totals . . . . .	6,207	89,214	468	3,196
Grand total . . . . .	35,989	400,254	4,628	11,512

*Reweighing.*

COMMODITY.	Number reweighed.	Correct.	Over- weight.	Under- weight.
Coal (loads) . . . . .	1,048	348	439	261
Miscellaneous . . . . .	112,651	83,868	13,544	15,239
Totals . . . . .	113,699	84,216	13,983	15,500

*Prosecutions.*

Total number prosecuted . . . . .	196
Convicted . . . . .	168
Discharged . . . . .	18
Continued . . . . .	7
Suspended . . . . .	3
Appealed . . . . .	11
Filed . . . . .	21
Probated . . . . .	1

Fines aggregating \$2,907 were imposed. In addition to these penalties, restitution was required to be made in two cases; and in several cases involving short weight in sales of ice, the defendants were required to supply free ice for a considerable period.

## LUMBER SURVEY.

The last annual report included only such surveys of lumber as were made during the period from July 1 to November 30, 1920, as the duties pertaining to such surveys were not fully assumed by the Director until the former date. Opportunity for comparison is therefore limited, although it is noticeable that the total amount surveyed during the past year exceeded that of the five months immediately preceding by only 797,507 board feet, or about 5 per cent.

It is evident that this only reflected the universal business depression which had come upon the country through the inevitable reaction from conditions caused by the late war. With this in mind, as we look back over the past year, it is easy to realize that it has been a period of recovery and recuperation. It seems fairly clear that the most critical period of readjustment in the lumber business was reached about

October 1, since which time increased activity has been shown. It is now generally recognized that this increase is likely to be constant though gradual. From present indications there is every reason for the belief that the service of lumber survey will in future be easily self-supporting.

*Lumber Surveyed and Measured in the Year ending November 30, 1921.*

[Unless otherwise specified, figures indicate number of feet, board measure.]

Ash logs . . . . .	4,300
Cypress . . . . .	1,241,462
Fir . . . . .	300,516
Flooring . . . . .	510,126
Hard pine . . . . .	2,873,311
Hardwood . . . . .	2,441,212
Hemlock . . . . .	260,614
Larch . . . . .	44,387
North Carolina pine . . . . .	3,385,458
Pine boards . . . . .	2,196,721
Redwood . . . . .	3,000
Spruce . . . . .	2,825,998
Tupelo . . . . .	24,825
White pine . . . . .	459,347
White wood . . . . .	78,104
Yellow pine . . . . .	778,078

Total amount surveyed and measured . . . . .	17,427,459
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In addition to the above, 154 hackmatack ship knees, 170 "squares" of Jumbo shingles, 239 $\frac{3}{4}$  "thousands" of cedar shingles, and 64,100 spruce laths were surveyed during the year.

FINANCIAL STATEMENT.

*Receipts from License Fees.*

State (hawkers' and pedlers') . . . . .	\$55,750 00
City (hawkers' and pedlers') . . . . .	7,135 00
Town (hawkers' and pedlers') . . . . .	7,928 00
County (hawkers' and pedlers') . . . . .	2,915 00
Transient vendors' . . . . .	4,050 00
Interest on deposits . . . . .	185 06

Total receipts from license fees . . . . .	\$77,963 06
Receipts from fees for testing clinical thermometers . . . . .	131 34

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\$78,094 40

*Payments to State Treasurer.*

State license fees . . . . .	\$55,750 00
City license fees . . . . .	275 00
Town license fees . . . . .	670 00
County license fees . . . . .	634 00
Transient vendors' . . . . .	4,050 00
Interest . . . . .	185 06

Total income to Commonwealth from licenses, etc. . . . .	\$61,564 06
Fees for testing clinical thermometers . . . . .	131 34
	<hr/>
	\$61,695 40

*Payments to City, Town and County Treasurers on Account of Hawkers' and Pedlers' Licenses.*

Cities . . . . .	\$6,860 00
Towns . . . . .	7,258 00
Counties . . . . .	2,281 00
	<hr/>
	\$16,399 00

*Annual Appropriation (exclusive of Lumber Survey).*

For salaries . . . . .	\$19,380 00
For general expenses . . . . .	11,000 00
	<hr/>
Total . . . . .	\$30,380 00

*Expenditures.*

For salaries . . . . .	\$19,129 20
For general expenses . . . . .	8,356 14
	<hr/>
Total . . . . .	\$27,485 34

*Recapitulation.*

Total appropriation . . . . .	\$30,380 00
Expended . . . . .	27,485 34
	<hr/>

Unexpended balance . . . . . \$2,894 66

Total income from licenses, interest and fees for clinical thermometers, etc. . . . .	\$61,695 40 <sup>1</sup>
Total expenditures, exclusive of lumber survey . . . . .	27,485 34
	<hr/>

Excess of income over expenditures . . . . . \$34,210 06

<sup>1</sup> This does not include the sum of \$16,399 received as fees for hawkers' and pedlers' licenses and paid over to the treasurers of counties, cities and towns for which these licenses were issued.

*Account of Lumber Survey.*

Received for fees and expenses for lumber surveys (including \$1,141.60 bills receivable November 30, 1920)	\$10,978 98
Received for interest on deposits	15 59
Paid over to State Treasurer	\$10,994 57
Bills receivable on November 30	776 38 <sup>1</sup>
Total income from lumber surveys	\$11,770 95
Total expenditures for lumber surveys	\$12,459 43
Total income for lumber surveys	10,629 35 <sup>2</sup>
Excess of expenditures over income	\$1,830 08
Appropriation for salaries	\$34,400 00
Appropriation for general expenses	5,500 00
Total appropriation	\$39,900 00
Expended for salaries	\$10,864 11
General expenses	1,595 32
Total expenditures	\$12,459 43
Unexpended balance	\$27,440 57

*Summary, Financial Statement.*

	1921 Appropriations.	Expenditures.	Unexpended Balance.	1922 Estimated Expenditures.
Division of Standards:				
Personal services	\$19,380 00	\$19,129 20	\$250 80	\$20,750 00
Expenses	11,000 00	8,298 16	2,701 84	11,605 00
Totals	\$30,380 00	\$27,427 36	\$2,952 64	\$32,355 00
Survey of Lumber:				
Personal services	\$34,400 00	\$10,864 11	\$23,535 89	\$34,440 00
Expenses	5,500 00	1,595 32	3,904 68	4,890 00
Totals	\$39,900 00	\$12,459 43	\$27,440 57	\$39,330 00

<sup>1</sup> At time of filing this report, \$547.94 of this amount had been collected.<sup>2</sup> Not including bills receivable November 30, 1921.

# DEPARTMENT OF LABOR AND INDUSTRIES.

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## **ADMINISTRATION OFFICE.**

Rooms 469-473, State House, Boston.

Includes offices of commissioners and directors of divisions.

The office of the Director of Standards is Room 194, State House.

## **BRANCH OFFICES.**

### **Division of Industrial Safety.**

Fall River, Globe Building.      North Adams, New Kimbell Building.

Lawrence, Bay State Building.      Springfield, Myrick Building.

Worcester, Slater Building.

## **PUBLIC EMPLOYMENT OFFICES.**

Boston, 25 Pearl Street.

Mercantile Branch, 25 Tremont Street.

Worcester, 48 Green Street.      Springfield, 55 Water Street.







The Commonwealth of Massachusetts

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DEPARTMENT OF LABOR AND INDUSTRIES

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# REPORT

OF THE

# DIRECTOR OF STANDARDS

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REPRINT FROM THE ANNUAL REPORT OF THE  
DEPARTMENT OF LABOR AND INDUSTRIES

FOR THE

YEAR ENDING NOVEMBER 30, 1922





The Commonwealth of Massachusetts

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DEPARTMENT OF LABOR AND INDUSTRIES

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# REPORT

OF THE

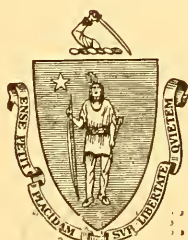
# DIRECTOR OF STANDARDS

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REPRINT FROM THE ANNUAL REPORT OF THE  
DEPARTMENT OF LABOR AND INDUSTRIES

FOR THE

YEAR ENDING NOVEMBER 30, 1922



Publication of this Document  
approved by the  
Commission on Administration and Finance

# OFFICIALS OF THE DEPARTMENT OF LABOR AND INDUSTRIES.

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## Commissioner.

E. LEROY SWEETSER.

## Assistant Commissioner.

ETHEL M. JOHNSON.

## Associate Commissioners.

EDWARD FISHER.  
SAMUEL ROSS.  
HERBERT P. WASGATT.

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## Director of Standards.

FRANCIS MEREDITH.

C. E. S. F. I. G. E. L. B. H. V. U. L. O.  
C. E. S. F. I. G. E. L. B. H. V. U. L. O.  
C. E. S. F. I. G. E. L. B. H. V. U. L. O.

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C. E. S. F. I. G. E. L. B. H. V. U. L. O.

# REPORT OF THE DIVISION OF STANDARDS.

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FRANCIS MEREDITH, *Director of Standards.*

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## SUMMARY.

In the last report attention was called to the fact that the lack of sufficient help might have caused serious impairment of efficiency were it not for the clerical and inspectional force whose individual efforts, regardless of hours of service, made progress possible. During the past year one addition has been made to the clerical force and the financial statement included in this report will show that the increase in net revenue of the office more than offset this added expense.

Each of the 355 cities and towns has in the past been furnished by the Commonwealth with standard weights, measures, and balances, which the statutes require to be periodically tested, adjusted and sealed or certified under the direction of the Director of Standards so as to maintain uniform standards throughout the State. Owing to the lack of sufficient working force and proper laboratory space this work has been performed at a disadvantage and the calibration of many local standards is long overdue. The number of clinical thermometers submitted for test has also increased materially and several thousands of these instruments are now awaiting test in our laboratory. For these and other reasons it is imperative that an additional inspector with special qualifications for laboratory work be appointed, and that additional laboratory space adjoining our present quarters be provided without delay.

This Division may be likened to a clearing house through which the knowledge acquired by investigation and experience is made available to the manufacturer who desires assistance in standardizing his products, to the purchaser who doubts that he has received the quantity paid for, or to any one seeking information relative to the volume, weight, quality, or strength of various materials. These functions are performed freely in connection with the multifarious duties imposed by statute to which extended reference has been made in previous reports. It is a source of regret that, excepting by those coming from time to time in direct contact with this branch of the public service, its activities are too little known or appreciated, despite the fact that they constitute a source of revenue instead of expense to the Commonwealth.

## LEGISLATION ENACTED IN 1922.

Following the enactment of chapter 248, Acts of 1921, establishing the "Standard Box for Farm Produce," a commission, consisting of the Commissioner of Labor and Industries, the Director of Standards, the Commissioner of Agriculture and the Director of the Division of Markets, was appointed to investigate the expediency of revising the established legal weights per bushel of fruits, vegetables and other commodities, and to recommend legislation that would tend to establish a more satisfactory basis for retail sales. The results of this investigation are succinctly stated in the following paragraph taken from the Commission's report:—

"The fallacy of attempting to remedy the conditions outlined in the preceding pages by any changes in the established bushel weights is apparent, as any weight adopted must necessarily be arbitrary and cannot reasonably be expected to represent the actual weight of a bushel of any commodity at the time of sale. Experience teaches that a standard unit of measure must be definite and constant, having a fixed and uniform value at all times and under all conditions and circumstances. The avoirdupois pound meets with all these requirements, and there appears to be a substantial unanimity of opinion on the part of all concerned in favor of requiring all retail sales of fruits, vegetables and grains to be made on the basis of avoirdupois weight, exception being made in regard to certain fruits or vegetables which have been carefully graded as to size, in which case the sale may be made upon the basis of numerical count, and provided, also, that retail sales may be made in any original unbroken standard container in which the goods were received by the retailer. In order to accomplish the desired change, several amendments to existing statutes are necessary. These have been included in the following bill, the speedy enactment of which is unanimously recommended.

With some slight changes the bill accompanying the report was enacted as chapter 355, Acts of 1922, which became effective on July 31. The new law harmonizes completely with the Federal Law which has been in operation in the District of Columbia during the past two years, and copies have already been requested to serve as models for similar legislation now pending in other states.

Another bill enacted by the General Court at the last session was chapter 186, Acts of 1922, amending the law relative to the weight of bread.

The amended law provides that the weights shall be determined by the average weight of not less than six loaves within twelve hours after baking, instead of requiring the weight of twelve loaves to be averaged as provided in the former law. It also provides that bread found upon any premises occupied for the manufacture of bread, or any bread found in any vehicles or receptacles owned or controlled by the manufacturer, shall be deemed to have been baked within twelve hours, unless designated or segregated as stale bread under regulations prescribed by the Director of Standards. It also requires the manufacturer of bread and his servants or agents to give information to the Director, or inspectors of standards, or sealers of weights and measures, as to the weight of any bread inspected at the bakery, and if not of standard weight, to furnish samples of the labels or wrappers to be used on such loaves, under penalty of \$100 fine. It further gives the inspecting officer authority to seize without warrant any bread which he deems necessary for use as evidence of violation of law. As the principal objection to the former statute was the difficulty of enforcement, the amended law is expected to remedy this condition and should be rigidly enforced.

These were the only enactments of particular interest to this Division, no recommendations for new legislation having been made in my last annual report.

#### RULES AND REGULATIONS.

Amended rules and regulations to be observed in the manufacture and sale of bread have been prepared and promulgated under authority of chapter 94, General Laws, as amended by chapter 186, Acts of 1922. Rules, regulations, specifications and tolerances relative to the manufacture and sale of clinical thermometers have also been prescribed and promulgated under statutory authority. As penalties for violations of these rules and regulations are provided by statute, attested copies of the same have been filed with the State Secretary as required by section 37, chapter 30, General Laws.

#### LEGISLATION RECOMMENDED.

During the past three years I have consistently refrained from recommending new legislation upon the ground that only a general public demand or urgent necessity would justify such recommendations so soon after the general revision of the statutes and their re-enactment in the form of the present "General Laws." Present conditions, however, appear to require further legislative action providing



for the payment of examination fees by applicants for certificates of fitness for appointment as measurers of leather, thus relieving the Commonwealth of a considerable and unwarranted expense involved in such examination. Sales of variable quantities of coal in paper bags, at prices which result in a cost of nearly \$30 per ton, present a condition which may be remedied in part by legislation establishing a uniform quantity to be sold in such packages.

#### EXAMINATION FEES FOR MEASURERS OF LEATHER.

The measurement of upper leather and problems involving the mechanism and operation of leather-measuring devices are subjects which are continually brought to the attention of this Division. Manufacturers of shoes and of leather, as well as all shoe-cutters, are interested, the latter perhaps most vitally, as their tenure of service is often dependent upon their ability to produce a certain number of shoe uppers from a given quantity of leather.

Under statutory authority the Director of Standards has prescribed the speed of operation of power-driven leather-measuring devices and promulgated regulations designed to minimize or eliminate mechanical errors. Existing law does not, however, sufficiently protect against the possibility of human error as a measurer once certified and appointed may undertake to operate types of leather-measuring devices with which he is totally unfamiliar.

While there are but approximately 225 leather-measuring devices operated in this state, more than 900 leather measurers have been certified and appointed during the ten years since the existing statute was enacted, making four qualified measurers to each measuring device in use. In spite of this great surplus of qualified measurers, and probably because, under existing law, application and examination involves no expense to the applicant, 52 persons have applied for certificates of fitness for appointment as measurers of leather during the past year. Examination of each of these applicants involved an expense of \$5 to \$10 to the Commonwealth, and as 25 failed to pass, it is apparent that the imposition of an adequate examination fee would tend to discourage the filing of applications by unqualified persons. Furthermore, it appears to be the settled policy of the Commonwealth to charge fees for examination or licenses in all cases where occupational licenses, permits, or certificates are required.

The enactment of the accompanying bill entitled "An Act Relative to the Examination of Applicants for Certificates of Fitness for Appointment as Measurers of Leather"<sup>1</sup> is therefore recommended.

#### SALE OF COAL IN PAPER BAGS OR SACKS.

Many persons, especially among the poorer classes, purchase coal by the bag, paying at the rate of nearly \$30 per ton in some instances at the present time. Under the existing law it is required that the weight of the coal therein be stated upon bags or baskets used in the sale of coal in quantities of less than 100 pounds.

Originally, paper bags used in the sale of coal uniformly contained 25 pounds. Subsequently, irresponsible dealers began to sell bag coal at cut prices, at the same time reducing the quantity so that the unit price per pound was actually greater than that received by their competitors for 25-pound bags sold at a higher price per bag. As a result of this cut-throat competition, cases have been reported where but 14 pounds of coal were sold in paper bags, other reports showing varying weights put up by dealers in different sections, a considerable number adhering to the trade standard of 25 pounds, that quantity being an aliquot part of the ton, and its cost and selling price being thus easily determinable upon the basis of the cost per ton.

The minimum dimensions, filling point and marking of paper bags used in the sale by measure of coke, charcoal and kindling wood are already regulated by statute and many former causes of complaint have thus been removed. Legislation

<sup>1</sup> Copies of bills embodying proposed legislation have been filed with the Secretary of the Commonwealth.

establishing a uniform quantity of coal to be sold in similar containers should tend to eliminate unfair competition, and, by providing a definite factor of quantity would enable purchasers to compare relative values upon the basis of quality and price. A bill<sup>1</sup> requiring that such bags shall contain, and shall be sold as containing, 25 pounds, is accordingly submitted and its enactment earnestly recommended.

#### DIVISIONAL PUBLICATIONS.

During the year a twelve page pamphlet,<sup>2</sup> containing legislation of 1922 relative to weights and measures, was published as a supplement to the compilation of weights and measures laws previously issued.

There was also published a bulletin<sup>3</sup> of sixteen pages containing a synopsis of recent amendments to the General Laws and explaining the effect of these amendments upon existing statutes.

Other publications, in pamphlet form, included rules, regulations, specifications and tolerances relative to the manufacture and sale of clinical thermometers; also rules and regulations to be observed in the manufacture and sale of bread. These rules, regulations, etc., were prepared and promulgated under statutory authority as explained in a previous paragraph.

Cards containing the amended law requiring fruits, vegetables, etc., to be sold at retail by weight or count, and others containing brief reference tables of weights and measures, together with the amended bread law, in leaflet form, complete the list of divisional publications.

#### CLINICAL THERMOMETERS.

The enforcement of the statutory provisions governing the manufacture and sale of clinical thermometers has been greatly facilitated by the enactment of chapter 263, Acts of 1921. This act amended the former statute, giving the Director necessary powers for its enforcement and establishing fees for testing which should practically cover the expense of this branch of the work. Since the last report one manufacturer of clinical thermometers has been granted authority to affix the manufacturer's seal-mark upon his products, while the authority previously granted to another was revoked for the reason that the authorized seal-mark had been affixed to inferior instruments which did not conform to the approved samples of his production.

During recent months a considerable number of clinical thermometers have been imported, chiefly from Germany. The United States customs laws require that manufactured articles imported shall be plainly marked so as to show the country of origin, this marking to be indelible whenever practicable. This requirement has been evaded by collusion between the foreign shipper and the consignee in this country. Instead of engraving the words "Made in Germany," etc., this statement was printed upon the glass tube by means of a rubber stamp over which a thin coat of shellac was applied, giving the appearance of permanency to the marking. After passing the customs authorities the rubber stamp marking could be easily erased and another marking substituted, indicating that the instruments were of domestic manufacture.

Of 1,469 foreign thermometers submitted since the last report, only 775, or 52.75 per cent, passed a satisfactory test, the balance being condemned and seized under statutory authority, thus again emphasizing the importance of rigid supervision of these instruments.

At the last session of the Connecticut legislature a law was enacted regulating the sale of clinical thermometers in that state and our co-operation and advice have been sought by and freely given to the officials charged with its enforcement. In the

<sup>1</sup> Copies of bills embodying proposed legislation have been filed with the Secretary of the Commonwealth.

<sup>2</sup> Supplement to General Laws of Massachusetts, relating to Weights and Measures, etc., 1922.

<sup>3</sup> Bulletin No. 19, 1922.



absence of similar legislation in other states, hospital authorities and others in various sections of the country specify in ordering clinical thermometers that the same must be sealed or certified under the provisions of the Massachusetts law, thus again showing the importance and beneficent effect of this enactment.

#### LABORATORY WORK.

Following is a brief synopsis of laboratory activities during the year:

##### *Calibration of Standards.*

ARTICLE.	Adjusted.	Sealed.	Condemned.
Weights . . . . .	107	247	7
Graduates . . . . .	—	60	31
Linear Measures . . . . .	—	1	—
Totals . . . . .	107	308	38

##### *Clinical Thermometers.*

SUBMITTED BY —	Number tested.	Number passed.	Number rejected.	Per Cent passed.
Manufacturers . . . . .	3,698	2,827	871	76.44
Dealers:				
Domestic thermometers . . . . .	1,157	839	318	72.51
Foreign thermometers . . . . .	1,469	775	694	52.75
Totals . . . . .	6,324	4,441	1,883	70.22

##### *Résumé.*

Clinical thermometers of domestic manufacture tested, 4,855; passed, 3,666; rejected, 1,189; per cent passed, 75.50.

Foreign thermometers tested, 1,469; passed, 775; rejected, 694; per cent passed, 52.75.

#### CANS, CARTONS AND OTHER CONTAINERS.

The following laboratory tests were made in connection with applications of various manufacturers for authority to affix the manufacturer's seal upon milk jars, milk and ice-cream cans, and graduated glass measures; for approval of shape and dimensions of paper or fiber cartons intended for use in the sale by measure of ice cream or other viscous or semi-solid commodities; and for various other purposes: —

ARTICLE.	Tested.	Accurate.	Inaccurate.
Milk jars . . . . .	40	40	—
Milk cans . . . . .	98	80	18
Ice cream cans . . . . .	60	46	14
Graduates . . . . .	17	11	6
Cartons, ice cream . . . . .	167	120	47
Cartons, viscous, etc., commodities . . . . .	206	168	38
Totals . . . . .	588	465	123

*Miscellaneous.*

ARTICLE.	Tested.	Accurate.	Inaccurate.
Bottles . . . . .	15	13	2
Incubator thermometers . . . . .	1	1	—
Jugs . . . . .	3	3	—
Measures, dry . . . . .	2	2	—
Measures, linear . . . . .	1	1	—
Measures, liquid . . . . .	221	215	6
Scales . . . . .	5	3	2
Tapes . . . . .	5	5	—
Weights . . . . .	24	18	6
Totals . . . . .	277	261	16

In addition to the above, 41,252½ yards of sewing thread were remeasured; 2 packages (1,046) paper napkins counted; 1 roll of rick-rack braid and 6 miscellaneous packages were weighed to determine quantity of contents. The precise weight of 2 scale-pans and 9 scale-weights was also determined for the Massachusetts Institute of Technology, and a quantity of amalgam scrap was weighed to determine its weight in Troy ounces.

*FIELD WORK OF INSPECTORS.*

Following is a summary of inspection records covering, as a rule, only those inspections which showed conditions requiring correction. Conditions found in 33 instances appeared to warrant prosecution, and these cases were therefore brought to the attention of the courts:—

*Number of Inspections.*

Coal wagons (Weigher's certificates, etc.) . . . . .	67
Factories, (Measuring machines, etc.) . . . . .	37
Gasoline pumps . . . . .	890
Ice wagons . . . . .	18
Net weight marking . . . . .	66
Package reweighings . . . . .	40
Pedlers . . . . .	416
Stores . . . . .	2,191
Transient vendors . . . . .	61
Total . . . . .	3,786

*Weighing and Measuring Devices.*

Sealed . . . . .	14,599
Unsealed . . . . .	2,347
Total number inspected . . . . .	16,946
Accurate . . . . .	4,465
Inaccurate . . . . .	789
Total number tested . . . . .	5,254

<sup>1</sup> Figures given do not include inspections which were made of the standard weights, measures, and balances furnished by the Commonwealth to each city and town and now in the custody of the city and town treasurer.

*Reweighings.*

COMMODITY.	Number of reweighings.	Correct.	Under.	Over.
Packages . . . . .	4,545	2,098	1,266	1,181
Coal (loads) . . . . .	67	9	22	36
Coal (in bags) . . . . .	154	31	48	75
Ice . . . . .	16	4	10	4
Totals . . . . .	4,784	2,142	1,346	1,296

*State Institutions.*

ARTICLE.	Adjusted.	Sealed.	Condemned.
Scales . . . . .	63	704	78
Weights . . . . .	109	2,812	22
Measures . . . . .	-	19	-
Graduates . . . . .	-	10	10
Pumps . . . . .	-	9	1
Totals . . . . .	172	3,554	111

*Miscellaneous.*

Complaints investigated . . . . .	78
Prosecutions . . . . .	33
Leather measurers examined . . . . .	52

## OFFICE WORK.

Since the last report hearings have been given by the Director of Standards to 79 persons, firms, or corporations, under statutory provisions. Of these cases 39 involved violations of the law requiring a statement of weight, etc., upon loaves of bread of other than standard weight. The remaining 40 hearings resulted from complaints of violations of the statute relative to marking the quantity of contents upon packages containing food.

Fees received for various forms of licenses, for testing clinical thermometers, for surveys of lumber and from other sources totaled \$81,752.19. Cash and surety bonds to the amount of \$86,500 were deposited by 173 holders of transient vendors' licenses to be subject to legal proceedings in behalf of creditors having claims arising in connection with the business conducted under these licenses. A detailed financial statement covering these items is included elsewhere in this report.

## LICENSES.

Hawkers' and pedlers' licenses issued during the year numbered 2,805, an increase of 111 over the preceding year. This number included 1,156 State, 596 County, 312 City, and 741 Town licenses; all but one dollar of the fee received in each case for the three latter classes being paid over to the counties, cities and towns in which the licenses were to be exercised. In addition, 244 free licenses were issued to disabled veterans of the World War and 384 licenses were transferred without charge upon application of the original licenses. The total number of transient vendors' licenses issued was 173, as compared with 162 issued during the previous year.

## LOCAL SEALERS OF WEIGHTS AND MEASURES.

The following summary of work performed by local sealers has been compiled from the annual reports which section 37, chapter 98, General Laws, requires all sealers to make to the Director of Standards annually between the first and tenth days of December. Of 355 sealers in the Commonwealth, 29 have failed to comply

with this statutory requirement and the work, if any, performed by them is necessarily omitted from this compilation. Illness or other circumstances beyond the control of the sealer accounts for the non-receipt of reports in six instances.

Sealers in the following cities and towns failed to transmit their reports without offering any explanation for their inaction: Belchertown, Boxford, Grafton, Granville, Hatfield, Heath, Hopkinton, Leominster, Lincoln, Millis, Montgomery, Mt. Washington, New Braintree, Newburyport, Norfolk, Otis, Peru, Plainfield, Randolph, Reading, Russell, Southwick and Tyringham.

This being the second consecutive year in which the sealers in Belchertown, Hopkinton, Millis, Mt. Washington, New Braintree and Otis have disregarded the statute and failed to report, their selectmen will be notified so that necessary steps may be taken to give the residents of these towns the protection which the weights and measures laws are designed to afford. This may be accomplished by appointment of district sealers, as provided by section 36, chapter 98, General Laws, should no qualified local resident be willing to perform the duties of the office.

Credit should, however, be given to the great majority of local sealers to whose co-operation is largely due the continued improvement in methods and appliances used in determining the quantity of commodities offered for sale.

*Summary of Work performed by Local Sealers.*

ARTICLE.	Adjusted.	Sealed.	Non-sealed.	Condemned.
<i>Scales.</i>				
Platform (5,000 pounds and over) . . . . .	498	2,886	72	187
Platform (100 to 5,000 pounds) . . . . .	5,278	23,524	817	950
Counter (100 pounds or over) . . . . .	489	2,415	90	74
Counter (under 100 pounds) . . . . .	4,150	18,469	269	972
Beam (100 pounds or over) . . . . .	177	1,502	57	110
Beam (under 100 pounds) . . . . .	130	1,280	18	37
Spring (100 pounds or over) . . . . .	1,019	4,318	38	567
Spring (under 100 pounds) . . . . .	4,114	27,540	239	2,093
Computing (100 pounds or over) . . . . .	214	1,247	16	64
Computing (under 100 pounds) . . . . .	2,829	17,821	105	1,127
Personal weighing (slot) . . . . .	90	2,674	17	214
Prescription . . . . .	122	1,624	17	77
Jewelers' . . . . .	4	148	8	5
Miscellaneous . . . . .	33	136	-	9
Totals . . . . .	19,147	105,584	1,763	6,486
<i>Weights.</i>				
Avoirdupois . . . . .	14,052	190,185	418	753
Apothecary . . . . .	642	21,325	1	615
Metric . . . . .	215	10,860	58	150
Troy . . . . .	59	2,262	48	42
Totals . . . . .	14,968	224,632	525	1,560
<i>Measures.</i>				
Dry . . . . .	12	1,830	-	156
Liquid . . . . .	201	36,912	-	1,047
Yard measures . . . . .	-	7,230	-	290
Tapes . . . . .	-	100	-	5
Milk jars . . . . .	-	1,171	12	420
Glass graduates . . . . .	-	423	-	39
Ice-cream cans . . . . .	17	4,889	18	181
Fuel baskets . . . . .	-	2,083	2	94
Totals . . . . .	230	54,638	32	2,232
<i>Automatic Measuring Devices.</i>				
Gasoline pumps . . . . .	1,863	7,817	86	488
Oil pumps (lubricating, etc.) . . . . .	83	915	99	12
Quantity stops (on measuring pumps) . . . . .	1,819	24,057	-	271
Molasses pumps . . . . .	49	795	145	82
Cloth-measuring devices . . . . .	2	348	1	232
Measuring machines (leather, etc.) . . . . .	1	292	12	15
Taximeters . . . . .	999	1,231	4	155
Kerosene pumps . . . . .	205	1,876	78	117
Gasoline meters . . . . .	40	154	-	2
Totals . . . . .	5,061	37,485	425	1,374
Grand Totals . . . . .	39,406	422,339	2,745	11,652



*Reweighings.*

COMMODITY.	Number of reweighings.	Correct.	Over.	Under.
Coal (loads) . . . . .	855	306	352	197
Miscellaneous . . . . .	114,656	87,736	11,423	15,497
Totals . . . . .	115,511	88,042	11,775	15,694

*Prosecutions.*

NATURE OF COMPLAINT.	Number of Complaints.	Convicted.	Discharged.	Pleaded Nolo.	Filed.	Sentence suspended.	Defaulted.	Amount of Fines.
Peddling without license . . . . .	49	48	1	-	-	-	-	\$703
Peddling on expired license . . . . .	1	1	-	-	-	-	-	5
Peddling without license plate on vehicle . . . . .	1	-	1	-	-	-	-	-
Failing to exhibit pedler's license on demand . . . . .	1	1	-	-	-	-	-	5
Violation of transient vendors' license law . . . . .	2	-	2	-	-	-	-	-
Giving insufficient weight of coal . . . . .	18	14	2	2	3	-	-	280
Fraud and deceit in sale of coal . . . . .	10	10	-	-	-	-	-	275
Insufficient measure in sale of wood . . . . .	11	10	1	-	-	-	-	85
Insufficient weight in sale of ice . . . . .	23	23	-	-	3	-	-	370
Possession and use of false scales, etc. . . . .	22	20	2	-	4	-	-	220
Miscellaneous violations of weights and measures laws . . . . .	67	61	3	2	21	5	1	505
Totals . . . . .	205	188	12	4	31	5	1	\$2,248

In addition to the fines noted above, one defendant was sentenced to serve two months in the House of Correction; one delivered a ton of coal free to the aggrieved party in lieu of a fine; three convicted of giving short measure in the sale of firewood were ordered to deliver free ½ cord, ⅓ cord and ⅓ of wood respectively to the persons who had received short measure, and restitution in varying amounts was ordered in several other cases.

LUMBER SURVEY.

The official survey of lumber is a special service rendered only upon application of interested parties who are willing to bear the expense of such survey. Unofficial determination of grades and kinds of lumber are made by groups or individuals employed either temporarily or permanently by various lumber dealers who usually call for an official survey only in the settlement of controversies which arise from time to time between buyer and seller. Although the amount of lumber handled by a reduced force of surveyors during the past year exceeded that of the previous year by 671,408 feet, the income was \$293.32 less during the later period. Consequently, in spite of the increased activity in the building trades, there appears to be no definite basis upon which estimates may be made as to the personnel or appropriation necessary to carry on the work.



<i>Summary.</i>		
Appropriation personal services . . . . .	\$20,600 00	
Expended . . . . .	19,988 00	\$612 00
Appropriation general expenses . . . . .	\$11,600 00	
Expended . . . . .	8,976 90	2,623 10
Unexpended balance . . . . .		<u>\$3,235 10</u>
Total income from licenses, interest and fees for clinical thermometers, etc. . . . .		<sup>1</sup> \$64,357 19
Total expenditures, (exclusive of lumber survey) . . . . .		<u>28,964 90</u>
Excess of income over expenditures . . . . .		<u>\$35,392 29</u>

*Account of Lumber Survey.*

Received for fees and expenses for lumber surveys (including \$776.38 bills receivable November 30, 1921) . . . . .	\$11,139 98
Received for interest on deposits . . . . .	8 20
Total paid to State Treasurer . . . . .	<u>\$11,148 18</u>

*Condition for Year ending November 30, 1922.*

Surveyors Personal Services . . . . .	\$10,883 77	
General expenses . . . . .	986 86	\$11,870 63
Less:		
Fees and expenses paid . . . . .	\$10,363 60	
Bills receivable Nov. 30, 1922 . . . . .	329 44	
Interest . . . . .	8 20	10,701 24
Deficit for the year . . . . .		<u>\$1,169 39</u>
Summary:		
Appropriation for Personal Services . . . . .	\$34,160 00	
Expended . . . . .	10,883 77	\$23,276 23
Appropriation for General Expenses . . . . .	\$4,890 00	
Expended . . . . .	986 86	3,903 14
Unexpended balance . . . . .		<u>\$27,179 37</u>

*Résumé.*

Total payments to State Treasurer . . . . .	\$75,505 37
Total expenditures . . . . .	<u>40,835 53</u>
Excess of income over expenditures after deducting Lumber deficit . . . . .	<u>\$34,669 84</u>

<sup>1</sup> This does not include the sum of \$17,395 received as fees for hawkers' and peddlers' licenses and paid over to the treasurers of counties, cities and towns for which these licenses were issued.

## DEPARTMENT OF LABOR AND INDUSTRIES.

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### ADMINISTRATION OFFICES.

Rooms 469-473, State House, Boston.

Includes offices of commissioners and directors of divisions.

The office of the Director of Standards is Room 194, State House.









## DEPARTMENT OF LABOR AND INDUSTRIES.

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### PUBLICATIONS OF THE DIVISION OF STANDARDS.

Annual reports, First to sixteenth, 1907-1922.

#### Bulletins:

- |                                 |                          |
|---------------------------------|--------------------------|
| No. 4. March, 1915.             | No. 13. September, 1918. |
| No. 7. February, 1916.          | No. 14. April, 1919.     |
| No. 8. July, 1916.              | No. 15. May, 1919.       |
| No. 9. December, 1916.          | No. 16. October, 1919.   |
| No. 10. September, 1917.        | No. 18. November, 1921.  |
| No. 11. January, 1918.          | No. 19. November, 1922.  |
| Bulletin Supplement, May, 1918. |                          |

#### Miscellaneous:

- Statute and Regulations Governing the Sale of Bread.
- Clinical Thermometers.
- Sealers' Manual. (Instructions to Weights and Measures Officials.)
- General Laws relating to Weights and Measures and the Licensing, Inspection and Sale of Various Articles.
- Supplement to General Laws relating to Weights and Measures and the Licensing, Inspection and Sale of Various Articles.



